WE CLAIM:

1. A method of testing the audio performance of an acoustic device, the acoustic device comprising a device microphone and an auxiliary output device coupled to receive electric signals from the device microphone, the method comprising steps of:

(a) producing an electric audio signal;

(b) providing the electric audio signal as an input to an external speaker and outputting an acoustic audio signal representation thereof;

(c) providing the acoustic audio signal outputted from the external speaker as an input to the device microphone and outputting a further electric audio signal representation thereof;

(d) routing the further electric audio signal from the device microphone to the auxiliary output device and outputting it therefrom; and

(e) analyzing the further electric audio signal outputted from the auxiliary output device.

2. The method of claim 1 wherein in step (e) the further electric audio signal outputted from the auxiliary output device is compared to the electric audio signal produced in step (a).

3. The method of claim 1 wherein in step (e) at least one signal characteristic of the further electric audio signal is compared to a predefined test limit.

4. The method of claim 1 wherein in step (e) a plurality of characteristics of the further electric audio signal are compared to predefined test limits for a plurality of audio signal characteristics selected from the group including signal amplitude, frequency response and harmonic distortion.

5. The method of claim 1 including connecting the external speaker to the device microphone with a seal prior to step (c).

6. The method of claim 1 wherein the auxiliary output device includes a headset plug.

7. The method of claim 1 wherein the auxiliary output device includes a serial port.

8. The method of claim 1 wherein in step (a) the electric audio signal is produced externally to the acoustic device and in step (e) the further electric audio signal is analyzed externally to the acoustic device.

9. The method of claim 1 wherein the electric audio signal produced in step (a) represents a single tone signal.

10. The method of claim 1 wherein the electric audio signal produced in step (a) represents a multitone signal.

11. The method of claim 1 wherein the acoustic device is a hand-held voice-enabled wireless communications device having a microprocessor coupling the auxiliary output device to the device microphone.

12. The method of claim 11 wherein the acoustic device is enabled for two-way wireless data communications

13. The method of claim 1 wherein the acoustic device further comprises a device speaker and the auxiliary output device is an auxiliary input/output device that is coupled to provide electric signals to the device speaker, the method comprising further steps of:

(f) producing a speaker test electric audio signal;

(g) providing the speaker test electric audio signal through the auxiliary input/output device to the device speaker and outputting therefrom a device speaker acoustic audio signal representation of the speaker test electric audio signal;

(h) providing the device speaker acoustic audio signal outputted from the device speaker as an input to an external microphone and outputting a device speaker electric audio signal representation thereof; and

(i) analyzing the device speaker electric audio signal outputted from the external microphone.

14. A method of testing the audio performance of an acoustic device, wherein the acoustic device comprises a device speaker and an auxiliary input device coupled to provide electric signals to the device speaker, the method comprising steps of:

(a) producing a speaker test electric audio signal;

(b) providing the speaker test electric audio signal as an input to the auxiliary input device;

(c) routing the speaker test electric audio signal from the auxiliary input device to the device speaker;

(d) outputting from the device speaker a device speaker acoustic audio signal representation of the speaker test electric audio signal;

(e) providing the device speaker acoustic audio signal outputted from the device speaker as an input to an external microphone and outputting a device speaker electric audio signal representation thereof; and

(f) analyzing the device speaker electric audio signal outputted from the external microphone.

15. The method of claim 14 wherein in step (f) the device speaker electric audio signal outputted from the auxiliary output device is compared to the speaker test electric audio signal produced in step (a).

16. The method of claim 14 wherein in step (f) at least one signal characteristic of the device speaker electric audio signal is compared to a predefined test limit.

17. The method of claim 14 wherein in step (f) a plurality of characteristics of the device speaker electric audio signal are compared to predefined test limits for a plurality of audio signal characteristics selected from the group including signal amplitude, frequency response and harmonic distortion.

18. The method of claim 14 wherein the auxiliary input device includes a headset plug.

19. The method of claim 14 wherein the auxiliary input device includes a serial port.

20. The method of claim 14 wherein in step (a) the speaker test electric audio signal is produced externally to the acoustic device and in step (e) the device speaker electric audio signal is analyzed externally to the acoustic device.